

AMENDMENTS TO THE CLAIMS

CLAIMS 1-7 (Cancelled)

8. (New) An antireflection molded article which comprises a thermoplastic resin and has an antireflection face comprising (a) protrusions having fine pyramidal shapes or (b) depressions having shapes formed by removing fine pyramids, wherein the antireflection face is entirely formed with inclined faces of the protrusions and the depressions, an average of heights of the protrusions or an average of depths of the depressions is 50 to 600 nm, and an average of shortest distances between vertices of adjacent protrusions or between lowest portions of adjacent depressions is 50 to 400 nm.

9. (New) The antireflection molded article according to Claim 8, wherein the inclined faces of the protrusions or the depressions has an arithmetic average roughness (Ra) of 100 nm or smaller.

10. (New) An antireflection molded article which comprises a thermoplastic resin and has an antireflection face having a shape comprising fine protrusions and depressions, wherein the shape comprising fine protrusions and depressions is a shape having ridges formed by tightly arranging thin and long triangular prisms in a horizontal direction without vacant spaces between the prisms, a section of the shape in a direction perpendicular to the ridges formed with the triangular prisms has a shape formed with upward triangles and downward triangles tightly arranged alternately without vacant spaces between the triangles, the antireflection face is

entirely formed with inclined faces of protrusions and depressions, an average of heights from the bottom of the depressions to the top of the protrusions is 50 to 600 nm, an average of a shortest distance between vertices of adjacent protrusions is 50 to 400 nm, and the inclined faces of the protrusions and the depressions has an arithmetic average roughness (Ra) of 100 nm or smaller.

11. (New) An antireflection molded article which comprises a thermoplastic resin and has an antireflection face having a shape comprising fine protrusions or fine depressions, wherein the shape comprising fine protrusions or fine depressions is a shape having ridges formed by arranging thin and long triangular prisms in a horizontal direction with vacant spaces between the prisms or a shape formed by removing thin and long triangular prisms arranged in a horizontal direction with vacant spaces between the prisms, a protruded shape or a depressed shape of a section of the antireflection face in a direction perpendicular to the ridges formed with the triangular prisms is a triangular portion of the article or a triangular space, respectively, the antireflection face comprises inclined faces of the protrusions and the depressions and face portions parallel with the face of the antireflection molded article, an average of heights of the protrusions or depths of the depressions is 50 to 600 nm, an average of a shortest distance between vertices of adjacent protrusions or between lowest portions of adjacent depressions is 50 to 400 nm, and the inclined faces of the protrusions or the depressions has an arithmetic average roughness (Ra) of 100 nm or smaller.

12. (New) An antireflection molded article which comprises a thermoplastic resin and has a face comprising protrusions having fine pyramidal or conical shapes or depressions having shapes formed by removing fine pyramids or cones, wherein an antireflection face comprises inclined faces of the protrusions or the depressions and face portions parallel with a face of the antireflection molded article, an average of heights of the protrusions or depths of the depressions is 50 to 600 nm, an average of a shortest distance between vertices of adjacent protrusions or between lowest portions of adjacent depressions is 50 to 400 nm, and the inclined faces of the protrusions or the depressions has an arithmetic average roughness (Ra) of 100 nm or smaller.

13. (New) The antireflection molded article according to Claim 8, wherein the thermoplastic resin is a resin having an alicyclic structure.

14. (New) The antireflection molded article according to Claim 9, wherein the thermoplastic resin is a resin having an alicyclic structure.

15. (New) The antireflection molded article according to Claim 10, wherein the thermoplastic resin is a resin having an alicyclic structure.

16. (New) The antireflection molded article according to Claim 11, wherein the thermoplastic resin is a resin having an alicyclic structure.

17. (New) The antireflection molded article according to Claim 12, wherein the thermoplastic resin is a resin having an alicyclic structure.

18. (New) A process for producing the antireflection molded article described in Claim 8, which comprises:

(i) forming a shape selected from the group consisting of (a) a shape having protrusions and depressions, (b) a shape having protrusions and (c) a shape having depressions on a surface of a mold core or a stamper using a fine cutting machine having a precision of moving shafts in X, Y and Z directions of 10 nm or smaller and a single crystal diamond cutting tool having a surface having an arithmetic average roughness (Ra) of 10 nm or smaller in a thermostatted room controlled at a prescribed temperature $\pm 0.1^{\circ}\text{C}$, and

(ii) molding the thermoplastic resin into said article in accordance with an injection molding process using a mold assembled with said mold core or said stamper.

19. (New) A process for producing the antireflection molded article described in Claim 9, which comprises:

(i) forming a shape selected from the group consisting of (a) a shape having protrusions and depressions, (b) a shape having protrusions and (c) a shape having depressions on a surface of a mold core or a stamper using a fine cutting machine having a precision of moving shafts in X, Y and Z directions of 10 nm or smaller and a single crystal diamond cutting tool having a surface having an arithmetic average roughness (Ra) of 10 nm or smaller in a thermostatted room controlled at a prescribed temperature $\pm 0.1^{\circ}\text{C}$, and

(ii) molding the thermoplastic resin into said article in accordance with an injection molding process using a mold assembled with said mold core or said stamper.

20. (New) A process for producing the antireflection molded article described in Claim 10, which comprises:

(i) forming a shape selected from the group consisting of (a) a shape having protrusions and depressions, (b) a shape having protrusions and (c) a shape having depressions on a surface of a mold core or a stamper using a fine cutting machine having a precision of moving shafts in X, Y and Z directions of 10 nm or smaller and a single crystal diamond cutting tool having a surface having an arithmetic average roughness (Ra) of 10 nm or smaller in a thermostatted room controlled at a prescribed temperature $\pm 0.1^{\circ}\text{C}$, and

(ii) molding the thermoplastic resin into said article in accordance with an injection molding process using a mold assembled with said mold core or said stamper.

21. (New) A process for producing the antireflection molded article described in Claim 11, which comprises:

(i) forming a shape selected from the group consisting of (a) a shape having protrusions and depressions, (b) a shape having protrusions and (c) a shape having depressions on a surface of a mold core or a stamper using a fine cutting machine having a precision of moving shafts in X, Y and Z directions of 10 nm or smaller and a single crystal diamond cutting tool having a surface having an arithmetic average roughness (Ra) of 10 nm or smaller in a thermostatted room controlled at a prescribed temperature $\pm 0.1^{\circ}\text{C}$, and

(ii) molding the thermoplastic resin into said article in accordance with an injection molding process using a mold assembled with said mold core or said stamper.

22. (New) A process for producing the antireflection molded article described in Claim 12, which comprises:

(i) forming a shape selected from the group consisting of (a) a shape having protrusions and depressions, (b) a shape having protrusions and (c) a shape having depressions on a surface of a mold core or a stamper using a fine cutting machine having a precision of moving shafts in X, Y and Z directions of 10 nm or smaller and a single crystal diamond cutting tool having a surface having an arithmetic average roughness (Ra) of 10 nm or smaller in a thermostatted room controlled at a prescribed temperature $\pm 0.1^{\circ}\text{C}$, and

(ii) molding the thermoplastic resin into said article in accordance with an injection molding process using a mold assembled with said mold core or said stamper.

23. (New) A process for producing the antireflection molded article described in Claim 13, which comprises:

(i) forming a shape selected from the group consisting of (a) a shape having protrusions and depressions, (b) a shape having protrusions and (c) a shape having depressions on a surface of a mold core or a stamper using a fine cutting machine having a precision of moving shafts in X, Y and Z directions of 10 nm or smaller and a single crystal diamond cutting tool having a surface having an arithmetic average roughness (Ra) of 10 nm or smaller in a thermostatted room controlled at a prescribed temperature $\pm 0.1^{\circ}\text{C}$, and

(ii) molding the thermoplastic resin into said article in accordance with an injection molding process using a mold assembled with said mold core or said stamper.

24. (New) A process for producing the antireflection molded article described in Claim 14, which comprises:

(i) forming a shape selected from the group consisting of (a) a shape having protrusions and depressions, (b) a shape having protrusions and (c) a shape having depressions on a surface of a mold core or a stamper using a fine cutting machine having a precision of moving shafts in X, Y and Z directions of 10 nm or smaller and a single crystal diamond cutting tool having a surface having an arithmetic average roughness (Ra) of 10 nm or smaller in a thermostatted room controlled at a prescribed temperature $\pm 0.1^{\circ}\text{C}$, and

(ii) molding the thermoplastic resin into said article in accordance with an injection molding process using a mold assembled with said mold core or said stamper.

25. (New) A process for producing the antireflection molded article described in Claim 15, which comprises:

(i) forming a shape selected from the group consisting of (a) a shape having protrusions and depressions, (b) a shape having protrusions and (c) a shape having depressions on a surface of a mold core or a stamper using a fine cutting machine having a precision of moving shafts in X, Y and Z directions of 10 nm or smaller and a single crystal diamond cutting tool having a surface having an arithmetic average roughness (Ra) of 10 nm or smaller in a thermostatted room controlled at a prescribed temperature $\pm 0.1^{\circ}\text{C}$, and

(ii) molding the thermoplastic resin into said article in accordance with an injection molding process using a mold assembled with said mold core or said stamper.

26. (New) A process for producing the antireflection molded article described in Claim 16, which comprises:

(i) forming a shape selected from the group consisting of (a) a shape having protrusions and depressions, (b) a shape having protrusions and (c) a shape having depressions on a surface of a mold core or a stamper using a fine cutting machine having a precision of moving shafts in X, Y and Z directions of 10 nm or smaller and a single crystal diamond cutting tool having a surface having an arithmetic average roughness (Ra) of 10 nm or smaller in a thermostatted room controlled at a prescribed temperature $\pm 0.1^{\circ}\text{C}$, and

(ii) molding the thermoplastic resin into said article in accordance with an injection molding process using a mold assembled with said mold core or said stamper.

27. (New) A process for producing the antireflection molded article described in Claim 17, which comprises:

(i) forming a shape selected from the group consisting of (a) a shape having protrusions and depressions, (b) a shape having protrusions and (c) a shape having depressions on a surface of a mold core or a stamper using a fine cutting machine having a precision of moving shafts in X, Y and Z directions of 10 nm or smaller and a single crystal diamond cutting tool having a surface having an arithmetic average roughness (Ra) of 10 nm or smaller in a thermostatted room controlled at a prescribed temperature $\pm 0.1^{\circ}\text{C}$, and

(ii) molding the thermoplastic resin into said article in accordance with an injection molding process using a mold assembled with said mold core or said stamper.